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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,126	10/16/2003	Steven D. Gray	COS-759 DIV	7358

7590 11/18/2004  
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EXAMINER

CHOI, LING SIU

ART UNIT PAPER NUMBER

1713

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/687,126

Applicant(s)

GRAY ET AL.

Examiner

Ling-Siu Choi

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/16/2003.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Claims 1-27 are now pending, wherein claims 1-13 are drawn to a polymer and claims 14-27 are drawn to a process for  $\alpha$ -olefin polymerization.

### *Claim Objections*

2. Claims 1-27 are objected to because of the following informalities: (a) **claim 1**, **line 2**, "a) contacting" is suggested to be changed to --contacting--; **line 9**, "reaction product A" is suggested to be changed to --the reaction product A--; **line 10**, "reaction product B" is suggested to be changed to --a reaction product B--; **line 11**, "reaction product B" is suggested to be changed to --the reaction product B--; **line 12**, "reaction product C" is suggested to be changed to --a reaction product C--; **line 13**, "reaction product C" is suggested to be changed to --the reaction product C--; **line 16**, "150°C," is suggested to be changed to --150°C--and (b) **claim 14**, **line 9**, "reaction product A" is suggested to be changed to --the reaction product A--; **line 10**, "reaction product B" is suggested to be changed to --a reaction product B--; **line 11**, "reaction product B" is suggested to be changed to --the reaction product B--; **line 12**, "reaction product C" is suggested to be changed to --a reaction product C--; **line 13**, "reaction product C" is suggested to be changed to --the reaction product C--; **line 16**, "150°C," is suggested to be changed to --150°C--.

Appropriate correction is required.

**Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Shamshoum et al. (US 5,817,591).

The present invention relates to a polymer and a process to prepare the polymer in the presence of a catalyst which is obtained by

i	contacting a soluble <b>Mg(OR'')<sub>2</sub></b> with a <b>halogenating agent</b> to form a reaction product A
ii	contacting the reaction product A with a <b>first halogenating/titanating agent</b> to form a reaction product B
iii	contacting the reaction product B with a <b>second stronger halogenating/titanating agent</b> to form a reaction product C
iv	contacting the reaction product C with an organoaluminum preactivating agent to form a preactivated catalyst
v	heating the preactivated catalyst at a temperature of about 90°C to about 150°C for a time of about 30 minutes to about 24 hours

(summary of claim 1)

Shamshoum et al. disclose a polymer obtained in the presence of a catalyst made by the steps of (a) contacting  $\text{Mg(OR)}_2$  with a halogenating agent to form a halogenated product, (b) contacting the halogenated product with a hydrocarbon solvent to form a slurry, (c) adding 2-ethylhexanol to the slurry to solubilize the halogenated product into the **hydrocarbon solvent to form a solution, (d) contacting the resulting solution with titanium tetrachloride** to precipitate a solid product, (e) contacting the solid product with titanium tetrachloride and di-n-butyl phthalate to form an intermediate product, and (f) contacting the intermediate product with titanium tetrachloride to form a catalyst component (claims 1 and 6). Shamshoum et al. further disclose that a polymerization is carried out in the presence of the catalyst component, **triethyl aluminum**, CMDs, and  $\alpha$ -olefin at 70°C for 60 minutes (col. 5, lines 43-51; col. 7, lines 54-59). In view of the substantially identical catalyst used, the polymer obtained by Shamshoum et al. would be the same as the claimed polymer.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098. The examiner can normally be reached on Monday to Friday.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

Information regarding the status of an application may be obtained from the

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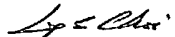
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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LING-SUI CHOI  
PRIMARY EXAMINER

Ling -Siu Choi

November 10, 2004